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Revised  
To regional coordinators for  
restricted distribution to breeders.

Resume  
A93.6  
P69

SERIES I. EVALUATION OF FOREIGN FRUITS AND NUTS.

NO. 3. APPLES AND PEARS

APPLE AND PEAR VARIETY INTRODUCTIONS NOW AVAILABLE  
FROM THE U. S. PLANT INTRODUCTION GARDEN  
GLENN DALE, MARYLAND

Prepared by

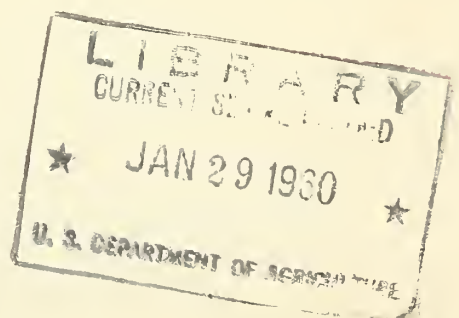
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United States Department of Agriculture

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This report is prepared as a cooperative service to state and federal experiment stations and presents evaluation data available on these varieties. Varietal names listed are those under which the material was introduced.

February 1956





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APPLES

<u>P.I.</u>	<u>Variety</u>	<u>Source</u>
20654	Abbondanza (Abundance, Belfor)	Italy 35 scions

206542

Introduced (P.I.105123) 1934 from Italy. Described in Bianchi catalogue (1932-3) as bearing fruit very large, of good form, skin colored entirely with handsome shining red; extensively grown in the Ferarese, a winter apple; in catalogue Arturo Ansaloni, Bologna, as bearing large, shining red fruit; tree vigorous and very productive, winter.

Described on 10/26/37 at Glenn Dale, Maryland. An attractive red, medium to large, white fleshed fruit, core very small but seed abundant. Flesh somewhat rubbery, flavor rather rich. Good. Probable season to January.

Picked at Glenn Dale, Maryland, 9/24/38 and described 10/24/38. Red color very high, firm flesh, good quality. Some mention in literature that it has been utilized in Italy as a root-stock. Has not colored well at Glenn Dale in some seasons. Might do better in high altitudes. Mentioned favorably by Dr. H. B. Tukey in American Fruit Grower; he saw it growing in northern Italy.

Introduced into Greece from Italy sometime between 1925-35, and renamed Belfor. Received from Prof. M. E. Alderman under P.I. 212369 from Salonica, Greece. It is now the most widely grown variety in Salonica region. Alderman comments on its fruiting in nursery row and being a heavy and consistent producer in the orchard. Fruits above medium size, round-oblato to round-conic, sometimes oblique. Not a good keeper and loses flavor quickly after maturity.

Apple Varieties Bred at Aomori Apple Experiment Station Japan  
(See original color illustrations in your library).

199525	Amanshiki	Ralls Janet x Indo
199531	Horei	Ralls Janet x Golden Delicious - 10 scions
205459	Kinrei	Golden Delicious x Delicious - 35 "
199527	Korei	Golden Delicious x Indo - 30 "
213557	Mutsu	Golden Delicious x Indo* - 20 "
195836	Shinko	Ralls Janet x Jonathan - 5 "
199533	Shinsei	Golden Delicious x Early McIntosh - 29 "
199532	Toyo	Orient# Open pollinated seedling of Delicious. - 2 "

\* The origin of Indo variety is not clear. It may be a chance seedling of Winter Pearmain.

# Aomori Station reports as good red color, long storage, not high quality.





<u>P.I.</u>	<u>Variety</u>	<u>Source</u>
184382 188723	A2 Apple Rootstock	Alnarp, Akarp, Sweden
	<p>Johansson, E. Grundstamstypen A2 (Apple rootstock A<sub>2</sub>)  Sverig. Pomol. Foren Arsskr. 1948. 49:71-76. A2 was  selected at Alnarp, Sweden, from imported rootstocks and  raised vegetatively. In numerous trials carried out in  different parts of Sweden, it was found to be as vigorous  as E.M.XVI, to be very hardy and to induce early bearing.  It is easily propagated in stool beds and by hardwood  cuttings. Cox's Orange trees planted in 1939 yielded from  1943 to 1948 a total of 88 and 46 kg. on A2 and E.M.XIII,  respectively. The corresponding figures for Laxton's Superb  are 141 and 78 kg. Belle de Boskoop trees planted in 1942  yielded 20.9 and 2.5 kg. from 1946 to 1948 on A2 and E.M. XVI,  respectively. Comparative data are tabulated for three other  varieties. It is anticipated that A2 will largely replace  seedling rootstocks, especially for the less vigorous varieties.</p> <p>Larsson, G. Plant Breeding Abstracts 2576, Vol. XX, 1950.  Apple stocks from East Malling and Alnarp (Sweden) have been  tested for hardiness since 1947. The Alnarp clone A2 proved  completely hardy, surviving the winter of 1943-49, with a  temperature generally about -20°C. without injury. This was  confirmed by another test at Kalin, where on a 10-grade scale  A2 was awarded 10 and E.M. XI came next with 9 points.</p>	
199684	Belle de Boskoop Bogo Strain	Holland
194096	Benitt's Roter Finkenwerder	Germany
	<p>A red budsport of Finkenwerder Herbststörz. The latter  variety widely planted because of its excellent flavor  and healthy growth. Best variety for general purposes.</p>	
194199	Bowden Seedling	England
203810	Charles Ross (Peasgood Nonesuch x Cox's Orange)	England
199100	Cheddar Cross	
	<p>Spinks, G. T. The new variety, - Cheddar Cross, is a hybrid  between Allington Pippin and Star of Devon. Dessert apple  with attractive appearance, ripening before Worcester Pearmain.</p>	
<del>203808</del> 203811	Cox's Orange (Cox's Orange Pippin)	England
	<p>Raised in 1830 from seed by H. Cox at Colnbrook-Lawn,  England, from seed of Ribston. As grown in England,  fruit of medium size, rounded ovoid, almost always one  side more developed than the other. Stem fairly long or  a little short, thin, flexible, set in a cavity. Skin</p>	





<u>P.I.</u>	<u>Variety</u>	<u>Source</u>
	<p>Cox's Orange continued.</p> <p>fairly fine, smooth, handsome yellow, amply washed with deep crimson dotted with brown and greyish white. Flesh white, tender, fine or half fine. Juice abundant or sufficient, well sweetened, highly acidulated, having a very savory flavor.</p> <p>In Germany fruit valued highly along with Gravenstein and Reisse Interkalvill as a very spicy fruit, edible in early autumn and keeping until late spring with full juiciness and freshness. Not as good appearance at harvest time as many other fruits. Tree cannot be called strong growing but it forms vigorous, bushy crowns with long, thin side branches.</p> <p>This variety has been used as a parent by apple breeders in the United States and Canada, as well as by European breeders.</p> <p>In Denmark, Cox's Orange is unexcelled in flavor when on not too heavy soils, but develops only fair red color. Seedlings of Cox's Orange have not supplied an improved variety. The Danish Ingrid Marie (Roter Cox's Orange) is in no way an improvement. The color is more pronounced but its keeping quality is poorer and the form is less satisfactory. The English production, Crimson Cox, which has been highly recommended, lacks flavor. A tree of Cox's Orange with particularly fine colored fruits was observed in one Danish grower's orchard. A 200 tree orchard of this (redsport?) planted on another site produced fruits of the same vivid red, having a flavor and keeping quality as good as Cox's Orange, if not better. In this variety, flavor is influenced by soil and stock.</p>	
205862	Gravensteiner (Gravenstein)	Germany 18 SCIONS
	Apples of New York, Vol.2:85	
199689	Gravenstein Red	Australia
	An Australian strain of Gravenstein	
199416 175543	Hereford Red Streak	England 29
214079	Ingrid Marie Schneider's Red Strain	Denmark 30



<u>P.I.</u>	<u>Variety</u>	<u>Source</u>
<u>Apple Varieties from Ireland</u>		Ireland
203808	Alpine ————— 5 SCIONS	
206021	Ballyfatten 16 "	
206022	Clear Heart — 10 "	
206024	Greasy Pippin — 3 "	
206026	Honey Ball — 14 "	
203814	Keegan's Crab — 15 "	
206030	Kemp ————— 30 "	
206031	Reid's Seedling — 10 "	
203818	White Crofton — 5 "	
206027	Irish Crofton — 14 "	
194106	Jonannes Bottner — 0 SCIONS	Germany 0 SCIONS

This apple variety, which has been continually improved by the breeder, is already widely grown in the Rhineland, where it is appreciated for its high yields and freedom from woolly aphid and canker, and for its keeping qualities

213554 K 32-100-3 Canada 20 SCIONS

Bred at Experiment Station, Kentville, Nova Scotia. Three seedlings were tetraploid. K-32-100-3, a Stark by Cox's Orange Pippin seedling, was one of these. It has more of the Stark characteristics than the Cox. The young trees have grown very rapidly, but scions frameworked into a young, thrifty tree along with some other seedling scions, with it in the best location in the tree, have grown rather slowly. So far it has been shy in bearing.

214145 K 33-112-3 Canada 30 SCIONS

Bred at Experiment Station, Kentville, Nova Scotia, Dr. R. P. Longley of that Station comments on this apple selection as follows: "The K 33-112-3 shows considerable promise. We are not in particular need of another variety in the McIntosh, Cortland season. If it is enough earlier it may have a place, but would then be in competition with Gravenstein and possibly Melba."

199419 Lamb Abbey Pearmain England 3 SCIONS

An old English apple variety

205048 Lord Lambourne England 45 SCIONS  
205049 203815  
213906 35-213906

Interest in this variety is in its value as an index of rubbery wood in other varieties. Buds of this number have been propagated on commercial apple seedlings. Under P.I. 205048 and 205049 we have rubbery wood free Lord Lambourne





on Malling XVI on Tree 442 and Malling XVI on Tree 470, both stock and scion indexed at the East Malling Station. We prefer to send scions or budwood from these earlier introductions as propagating wood becomes available.

Using the sensitive variety Lord Lambourne, the presence of rubbery wood virus has been demonstrated in the stoolbeds of the clonal apple rootstocks M.I and M.IX at East Malling. Six out of 12 tested stools of M.I were infected, and 10 out of 12 of M.IX. Tests on M.II, M.III, M.IV, M.VII, M.XII, M.XVI and Crab C from the Research Beds were negative, but stocks of M.III and M.VIII brought in from a commercial nursery were entirely infected. The current investigations on the virus status of rootstocks and scion varieties are discussed. Posnett, A.F. and Cropley, R. in Hort. Abs. 2306, Vol. II, Sept. 1952.

205559

Malus prunifolia. Sikora Type I.

Germany

4 SCIONS

K. J. Mauer, in pursuance of earlier experiments carried out at Sindolka, compared the nursery behaviour of Antonowka with that of 12 other varieties, submitting numerous data from a small-scale trial. Variation in height and diameter was considerable with all varieties tested and Antonowka proved to be more uniform than some others. By far the highest degree of uniformity was shown by Malus prunifolia Sikora Type I. Weissenheim Research Station.

209939

Malus sylvestris

Natal, S. Africa

58 "

205460

Merton Beauty

England

45 "

205461

Merton Delight

England

15 "

205462

Merton Pippin

England

7 "

207636

Red Cinnamon

Finland

8 "

199095

Red Transparent

Denmark

8 "

199693

Rome Beauty (Frimley Beauty Strain)

Denmark

199694

Rome Beauty (Glengyle Red Strain)

Denmark

45 "

(214080)

Rome Beauty (Red Australian Strain)

Denmark

40 "

(214080)

137577

Robusta #5.

Canada

4

The well-known hardy Canadian apple interstock.

205339

Ross Nonpareil

Ireland 8

203816

Scarlet Bramley (Crimson Bramley)

England 25

A uniform, large, attractive, smooth skinned, sub-acid to acid, English cooking apple, of interest because of crimson color on sunny side. It can be picked over a period of a month to six weeks; is firm and crisp even when left to ripen on tree; bears well and the tree is a well formed, spreading type. The picking season of this variety at Glenn Dale, Maryland, extended from 8/10/55 to 9/20/55. It is an excellent cooking and storage apple.





<u>P.I.</u>	<u>Variety</u>	<u>Source</u>
188523	Schellinkhout 6 SCIONS	Holland
On list of varieties worthy of trial in Holland. Origin probably a seedling of Princes Noble. Given a certificate of first class at Lunteren in 1934. Blooms middle early, pollen good. Grows moderately and forms a rather large tree. Bears moderately early, rather uniformly. Fruit rather small, green with light red stripes. Flesh with pleasing aroma, which recalls the Princess Noble. Very good handapple until November; in cold storage until January. Susceptibility to scab slight, - to canker rather slight. Dessert apple.		
125768	Schoner aus Miltenberg 15 SCIONS	Germany
Strong growing, healthy tree. Fruit medium size to rather large, greenish yellow, of beautiful appearance; good manufacturing apple, also suitable as a table apple. Blossoms medium early.		
187062	Souvenir de Fernand Cognet 20 SCIONS	France
Catalog of Leon Pin, Saint Genis-Laval (Rhône). A novelty. New variety of very great value; remarkable for its vigor and its resistance to diseases. The fruit, of medium size, is green, washed and dotted red in the sun. It can be consumed starting the end of November and keeps perfectly in cellar or fruit room until April. Flesh white, solid, very fine and juicy; delicately perfumed. Quality very good. Has an incomparable resistance to diseases, including woolly aphid.		
194420	Spasserud 0 SCIONS	Sweden
A local apple grown in Vermland, Sweden, for which the following characters are claimed:- exceptional frost resistance, great scab resistance, long storage life, classified dessert grade II.		
194144	S-5-4 12 SCIONS	Dominion Expt. Sta., Summerland, P
194145	S-4-8 9 "	" " " "
188524	Sterappel	Holland
On list of varieties locally recommended. Origin described first in 1830. Supposed to have been a native of the Netherlands or Belgium, a round, broad outstanding tree. Bears very late but then regularly and very well. Fruit moderately large, good hand apple until January, in cool house until February. Poor in Vitamin C. Tree is very healthy on high ground. Rating: Vitality 4; early fruiting 1; regular bearing 3; yield 4; resistance against scab and canker 3; fruit size 3; exterior of fruit 5; flavor 3; dessert.		



P.I.	Variety	Source
104815	Suislepper	Sweden 8 501115
205706	O-381	Ottawa, Canada
205707	T-391	" "
212583	Tallinnan Paarynaomena	Sweden 4 501115
125272	Upton <del>Pine</del> <sup>Pyne</sup>	England 20 213478
213478		

Described in 1936-7 catalog, George Pyne; a valuable late keeping apple raised at the Denver Nurseries (Pyne's). The fruit is large, conical, skin a bright yellow, the flavor of Golden Noble, but lightly striped with pale pink on the exposed side; handsome and suitable for exhibition. It is a sure and regular bearer, producing heavy crops of fruit in the worst seasons. During the years the trees have been on trial, from two years of age, they have never failed to produce good crops of fruit. It is quite distinct from any other variety; tree vigorous and of upright growth. The quality of the fruit is excellent; flesh white, firm and juicy; it is equally useful for either dessert or culinary purposes; at its best from Christmas to March. This variety has the largest and most beautiful blossom of any apple in cultivation.

At Glenn Dale, Maryland, picked 9/16/39 and on dwarf stock in nursery 9/8/55. Large (4 $\frac{1}{4}$ ), roundish, oblate apple, yellowish green covered about 25 to 40 percent with light red blush and stripes; flesh creamy white, firm, crisp, pleasantly acid flesh of good quality. Good dessert or cooking apple





P.I.

Variety

Source

219891

Vailearly

New Zealand 27 scions

A chance seedling discovered by A. E. Vaile in the northern peninsula of the North Island of New Zealand, on what is known here as "The Gumfields," an area once more or less covered by forests of kauri or Agatheia australis. Gravenstein is the best of the earlier apples. Irish Peach is much earlier but this has no quality and is a tip bearer. Vailearly is at least 5 weeks earlier than Gravenstein and a week or 2 earlier than Irish Peach. Vailearly crops heavily, regularly, ripens early, grows well, has good flavor and fine appearance.

206035

Worcester Pearmain

England 38 "

Originated near Worcesrer, England. Introduced into trade 1874. Like James Grieve it is a good annual bearer, fruit produced at ends of short one-year shoots rather than on spurs. Tree tends to bush type of growth; fruits of medium size, smooth, richly colored, fairly good in quality. Not as good quality as James Grieve or Charles Ross. Blossoms late at Long Ashton and when hit by frost while in full bloom in 1938, it suffered relatively little damage. Hoblyn, in trials of this variety at East Malling, found that too much nitrogen quickly ruins color and quality. Worcester Pearmain is extensively grown in Rhine region of Germany. In France it ripens in late August. At Glenn Dale, Maryland, fruit is picked about third week of August; skin is covered with dark red stripes; flesh is white, crisp and firm; flavor pleasant sub-acid, almost sweet; quality good. Skin develops a rough appearance and apples tend to run small unless thinned.

PEAR ROOTSTOCKS

Pyrus betulaefolia

214087	P6-40	50	scions	P.I. 214092	P6-443	2	"
214248	P6-40	50	"	214251	P6-443	50	"
214088	P6-43	2	"	214246	P6-18	50	"
214089	P6-140	2	"	214247	P6-25	25	"
214090	P6-142	5	"	214249	P6-227	50	"
214091	P6-246	50	"	214250	P6-299	50	"

Hort. Abs. XXI (No.3258) H. Muller. Vegetatively propagated Pillnitz pear rootstocks. Zuchter, 1950, 20:352-56.

Earlier work has shown that seedlings of Pyrus betulaefolia are particularly suitable for vegetative propagation as pear rootstocks and 38 clones are being studied at the Horticultural Research Station at Pillnitz near Dresden. A method,





<u>P.I.</u>	<u>Variety</u>	<u>Source</u>
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reported here, has now been worked out for the commercial propagation of the rootstock. The suckers in the stoolbed are earthed up in "the usual way" (presumably in spring and summer) and cut in the late autumn. They are then kept in a cellar during the winter and planted out in beds in the spring, about 5 cm. deep. Here root formation is profuse, being induced by etiolation. Tests with worked clones have so far shown (1) no instance of incompatibility (2) good anchorage (3) vigorous growth combined with early bearing. The rooting of the clones is illustrated by photographs and tabulated data.

"We do not find that our material is susceptible to blight, and the fruits of the varieties grafted on it are quite normal." (Extract from H.Muller letter).

PEAR VARIETIES

215320	Antoine Defosse	France	2 SCION
215321	Baronne Leroy	France	0
215322	Belle Angevine	France	0
215323	Belle Guerandaise	France	0
215324	Beurre Chasset	France	0
184844	Beurre Giffard	France	2
104045	Butirra d'Amanlis	Italy	3 SCIONS

Raised at Amanlis, near Rennes, France, before 1800, introduced 1826. Tree growth vigorous and straggling, good cropper. It is very hardy and grows well in Scotland; on the Continent it is reported to flourish at altitudes of 1000 feet. Fruits- medium (3 3/4 x 3.in) round, pyriform, fairly even. Skin bright yellow-green tinged with reddish-brown cheek on sunny side, patches and dots of russet. Skin slightly rough. Eye open with stout segments set in a slight basin. Stem long, slender, woody, inserted in a small cavity. Flesh yellowish-white, fine grained, tender, juicy, melting, rich, sweet, agreeably perfumed. Season - mid-September. (Pick end of August). Triploid Bul. 133, of Agric.

215326	Cl. Blanchet	France	2 SCION
212579	Comte de Chambord	Sweden	0
213907	Doyenne du Comice	England	2 SCIONS
206610	Hortellet	France	0
215327	Mme. Bonnefond	France	0



<u>P.I.</u>	<u>Variety</u>	<u>Source</u>	
215328	Mme. Dupuis	France	0 Seia
186636	<sup>Uysek</sup> Nijiseiki (Twentieth Century)	Japan	0 "
<p>Shaped like an apple, light lemon yellow, waxy; skin with minute humps like sand grains; flesh crisp, very juicy, containing some grit cells. Flavor extremely delicate with very pleasant; fruit tender. Trees grown 24 feet apart on trellises produce 48,000 pounds of fruit per acre in Japan. Varieties of Japanese pears now in use, according to Kajiura, may be divided roughly into two groups: Twentieth Century variety and other varieties. The Twentieth Century pear is considered the Japanese pear of best quality.</p>			
206609	Rifel Ongerose	France	0 SC
212582	Santa Claus	Sweden	0
215330	Soeur Gragoire	France	0
213908	William's Bon Chretien (Bartlett)	England	0

